



# GRAPHIC COMMUNICATIONS

## Advanced Graphic Communications

This course is designed to provide students with theory and hands-on experiences relative to the printing industry. The skills of the printing industry will be built upon by giving more real world experiences in the areas of digital file preparation, image capture, digital file output, press operations, binding and finishing, measurement, and basic math. The curriculum is aligned with the "Introduction To Graphic Communications" Printed competencies.

**USOE**  
**7/21/2008**

# Advanced Graphic Communications

Levels: Grades 11-12  
Units of Credit: Minimum 0.5  
CIP Code: 100303  
Prerequisite: ????

## COURSE DESCRIPTION

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## CORE STANDARDS, OBJECTIVES, AND INDICATORS

**STANDARD**      **Students will understand the role of graphic communications.**  
**100303-01**

### OBJECTIVES

100303-0101	Define the role of printing as a means of graphic communications.
100303-0102	Identify the key developments in the history of printing.
100303-0104	Identify print markets and types of print business.
100303-0105	Identify and describe the major printing process.
100303-0106	Identify the products produced by each major printing process.
100303-0107	List the advantages and disadvantages of each major printing process.
100303-0108	List in order the technical production flow from idea to finished product.
100303-0109	Identify major occupations in the printing industry and their responsibilities.
100303-0110	Identify and describe basic printing equipment.
100303-0111	Read and interpret production information from a job ticket/jacket.

**STANDARD**      **Students will understand and demonstrate safe practices.**  
**100303-02**

### OBJECTIVES

100303-0201	List safety rules involving flammable liquids.
100303-0202	List the steps to be taken in case of injury in the lab.
100303-0203	Identify location(s) of first aid kit(s).
100303-0204	Identify location(s) of eye wash station(s).
100303-0205	Identify where protective safety equipment is needed.
100303-0206	Follow proper safety procedures when operating equipment.
100303-0207	Follow approved shop dress code for safe operation.

100303-0208	Pass general lab safety test.
100303-0209	Read, comprehend and follow instructions on warning labels and MSDS.
100303-0210	Demonstrate common sense when working with others.

**STANDARD**  
**100303-03**      **Students will demonstrate basic mathematical concepts as it applies to graphic communications.**

**OBJECTIVES**

100303.0301	Solve addition of whole number problems.
100303.0302	Solve addition of fraction problems.
100303.0303	Solve addition of decimal problems.
100303.0304	Solve subtraction of whole number problems.
100303.0305	Solve subtraction of fraction problems.
100303.0306	Solve subtraction of decimal problems.
100303.0307	Solve multiplication of whole numbers.
100303.0308	Solve multiplication of fraction problems.
100303.0309	Solve multiplication of decimal problems.
100303.0310	Solve division of whole number problems.
100303.0311	Solve division of fraction problems.
100303.0312	Solve division of decimal problems.
100303.0313	Solve fractional to decimal conversion problems.
100303.0314	Solve decimal to fractional conversion problems.
100303.0315	Solve decimals to percent conversion problems.
100303.0316	Solve basic linear measure problems.
100303.0317	Calculate basic paper cuts from stock sheet.
100303.0318	Solve points to inches conversion problems.
100303.0319	Calculate the appropriate DPI for scanning various originals.
100303.0320	Solve cost calculating problems.

**STANDARD**  
**100303-04**      **Students will understand and demonstrate measuring systems.**

**OBJECTIVES**

100303-0401	Measure linear dimensions for printing materials in inches & fraction of inches.
100303-0402	Measure linear dimensions in centimeters & millimeters.
100303-0403	Measure type in points.
100303-0404	Measure copy for reduction and enlargement.
100303-0405	Measure elements in a page layout program.

**STANDARD**  
**100303-05**      **Students will demonstrate digital file preparation.**

**OBJECTIVES**

100303-0501	Identify type fundamentals & their uses.
100303-0502	Identify the fundamentals of the digital prepress workflow.

100303-0503	Identify the importance of image resolution.
100303-0504	Identify various digital information storage and their uses.
100303-0505	Identify various desktop publishing applications and their uses.
100303-0506	Design a page with appropriate margins, formatting, guides, trims and folds.
100303-0507	Import text into a page layout program.
100303-0508	Import an image into a page layout program.
100303-0509	Identify different file formats and their uses.
100303-0510	Identify the difference between continuous tone and line art images.
100303-0511	Identify and describe a halftone.
100303-0512	Define & identify bleeds.
100303-0513	Describe the difference between spot and process color.
100303-0514	Create a spot color in a page layout program.
100303-0515	Describe the difference between RGB and CMYK.
100303-0516	Create a multi-page layout in a page layout program.
100303-0517	Define the difference between raster and vector.
100303-0518	Create or edit a vector image in an image editing program.
100303-0519	Edit a raster image in an image editing program.
100303-0520	Demonstrate keyboard typing skills.

**STANDARD**  
**100303-06**      **Students will understand and demonstrate how to capture and image.**

**OBJECTIVES**

100303-0601	Identify various originals and their scanner settings (ie. Line Art, CT, Printed, Text).
100303-0602	Understand the effect of DPI on file size.
100303-0603	Identify basic scanning hardware.
100303-0604	Identify basic digital camera hardware.
100303-0605	Capture an image using a scanner or digital camera.

**STANDARD**  
**100303-07**      **Students will demonstrate digital file output processes.**

**OBJECTIVES**

100303-0701	Define trapping and its purpose.
100303-0702	Explain the purpose of a folding dummy.
100303-0703	Define imposition and signatures.
100303-0704	Identify computer-to-plate systems.
100303-0705	Identify image and non-image areas of an offset plate.
100303-0706	Produce a plate for offset printing.
100303-0707	Define registration marks and their uses.
100303-0708	Describe the purpose of a proof.
100303-0709	Output color separations from a page layout program.
100303-0710	Output a proper bleed from a page layout program.

**STANDARD  
100303-08**

**Students will be able to safely operate an offset press.**

**OBJECTIVES**

- 100303-0801 Identify offset press parts and operations.
- 100303-0802 Identify the cylinders of an offset press.
- 100303-0803 Identify safety and operation procedures for printing on an offset press.
- 100303-0804 Define the principles of offset lithography.
- 100303-0805 Compare the differences between digital printing and offset printing.
- 100303-0806 Describe printing applications.
- 100303-0807 Describe the technologies and equipment used in digital printing.
- 100303-0808 Perform setup for printing a single color job.
- 100303-0809 Produce a single color job using an offset press.
- 100303-0810 Perform basic cleanup of an offset press.

**STANDARD  
100303-09**

**Students will be able to safely finish and bind printed produces.**

**OBJECTIVES**

- 100303-0901 Identify operational & safety parts of a paper cutter.
- 100303-0902 Identify grain direction of paper.
- 100303-0903 Make accurate paper cuts using a mechanized paper cutter.
- 100303-0904 Identify basic paper types, and weights.
- 100303-0905 Identify padding equipment and materials.
- 100303-0906 Produce a pad of paper.
- 100303-0907 Identify stapling and stitching equipment.
- 100303-0908 Produce side and saddle stitched/stapled product.
- 100303-0909 Identify punching/drilling equipment and materials.
- 100303-0910 Produce a mechanical, or three ring bound product.
- 100303-0911 Identify folding equipment and basic folds.
- 100303-0912 Produce a single fold using folding equipment.
- 100303-0913 Identify different binding methods and applications. (ie perfect, case, sewn)
- 100303-0914 Identify various finishing methods & applications (ie. die-cutting, stamping, embossing).
- 100303-0915 Demonstrate basic paper jogging techniques.

**STANDARD  
100303-10**

**Students will know how to complete a job application and demonstrate interpersonal skills**

**OBJECTIVES**

- 100303-1001 Identify personal interests and learning styles.
- 100303-1002 Complete a self-assessment.
- 100303-1003 Discover self-motivation techniques.
- 100303-1004 Determine individual time-management skills.
- 100303-1005 Define future occupations.

100303-1006	Develop awareness of cultural diversity.
100303-1007	Recognize benefits of doing community service.
100303-1008	Demonstrate effective communication with others
100303-1009	Demonstrate proper work ethics and habits.
100303-1010	Identify components of an employment portfolio.

### **PROFESSIONAL DEVELOPMENT**

<b>STANDARD 100303-12</b>	<b>Student will understand the need for professional development.</b>
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#### **OBJECTIVES**

100303-1201	Complete a personal inventory.
100303-1202	Set and meet goals.
100303-1203	Be self-motivated.
100303-1204	Know how to make decisions.
100303-1205	Know how to manage time.
100303-1206	Organize personal belongings and lab equipment.
100303-1207	Learn to communicate verbally.
100303-1208	Write effective communications.
100303-1209	Establish a personal reading program.
100303-1210	Develop effective work skills and attitudes.
100303-1211*	Master a working knowledge of SkillsUSA. <ul style="list-style-type: none"> <li>▪ State the SkillsUSA motto.</li> <li>▪ State the SkillsUSA creed.</li> <li>▪ Learn the SkillsUSA colors.</li> <li>▪ Describe the official SkillsUSA dress.</li> <li>▪ Describe the procedure for becoming a SkillsUSA officer.</li> </ul>

<b>STANDARD 100303-13</b>	<b>Student will understand the need for leadership skills.</b>
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#### **OBJECTIVES**

100303-1301	Serve on a committee.
100303-1302	Prepare an agenda.
100303-1303	Assist in planning a meeting.
100303-1304	Review basic parliamentary procedure. <ul style="list-style-type: none"> <li>▪ Make a main motion.</li> </ul>
100303-1305	Participate in a school project.
100303-1306	Attend a community meeting.
100303-1307	Practice effective speaking.
100303-1308	Present a three- to five-minute talk.
100303-1309	Implement a leadership project.
100303-1310*	Master a working knowledge of SkillsUSA. <ul style="list-style-type: none"> <li>▪ Describe the meaning of the SkillsUSA emblem.</li> <li>▪ State the SkillsUSA pledge.</li> <li>▪ Describe the duties of a SkillsUSA officer.</li> </ul>

<b>STANDARD</b>	<b>Student will understand the need for career planning.</b>
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## **100303-14**

### **OBJECTIVES**

100303-1401	Define your future occupation.
100303-1402	Survey employment opportunities.
100303-1403	Report on a trade journal article.
100303-1404	Explore opportunities for advanced training.
100303-1405	Conduct a worker interview.
100303-1406	Contact a professional association.
100303-1407	Explore entrepreneurship opportunities.
100303-1408	Give a talk about your career.
100303-1409	Review career goals.

\* SkillsUSA PDP requirements - recommended

**\*Graphic Communications (The Printed Image) by Z.A. Prust**

**\*\*Pocket Pal (the handy little book of graphic arts production) ( ) Number of Questions Not Scored**

**564-Revised 01/04/2007**